

Pinus ponderosa / Schizachyrium scoparium Wooded Herbaceous Vegetation

COMMON NAME	Ponderosa Pine / Little Bluestem Wooded Herbaceous Vegetation
SYNONYM	Ponderosa Pine / Little Bluestem Savanna
PHYSIOGNOMIC CLASS	Herbaceous vegetation (V)
PHYSIOGNOMIC SUBCLASS	Perennial graminoid vegetation (V.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar grassland with a sparse tree layer (V.A.6)
PHYSIOGNOMIC SUBGROUP	Natural/semi-natural (V.A.6.N)
FORMATION	Medium-tall temperate or subpolar grassland with a sparse needle-leaved evergreen or mixed tree layer (V.A.6.N.f.)
ALLIANCE	<i>Pinus ponderosa</i> Wooded Medium-tall Herbaceous Alliance

CLASSIFICATION CONFIDENCE LEVEL 1

USFWS WETLAND SYSTEM Upland

RANGE

Globally

Currently reported from western Nebraska, South Dakota, and Wyoming; it is unknown if it also occurs in Montana and Colorado.

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This community occurs at widely-scattered sites, generally outside the Memorial boundaries. It is not common.

ENVIRONMENTAL DESCRIPTION

Globally

This community is found on loamy, sandy, or rocky soil. It is usually found on gentle to moderate slopes. Parent material is usually either sandstone or limestone (McAdams et. al 1998).

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Stands of this community were observed on slopes ranging from 13 to 24 degrees with southerly and westerly aspects, in areas underlain by schist.

MOST ABUNDANT SPECIES

Globally

Stratum

Tree canopy

Short shrub

Herbaceous

Species

Pinus ponderosa, *Juniperus scopulorum*

Rhus trilobata, *Symphoricarpos occidentalis*

Bouteloua gracilis, *Carex filifolia*, *Schizachyrium scoparium*

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Stratum

Tree canopy

Subcanopy

Short shrub

Herbaceous

Species

Pinus ponderosa

Pinus ponderosa

Juniperus communis

Schizachyrium scoparium

USGS-NPS Vegetation Mapping Program
Mount Rushmore National Memorial

DIAGNOSTIC SPECIES

Globally

Pinus ponderosa, *Schizachyrium scoparium*, *Yucca glauca*, *Opuntia* spp.

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Pinus ponderosa, *Schizachyrium scoparium*

VEGETATION DESCRIPTION

Globally

This community has scattered mature trees with a fairly continuous graminoid understory. *Pinus ponderosa* is the most abundant tree species, sometimes with *Juniperus scopulorum* present as small trees or tall shrubs. The most abundant graminoids in the understory are *Schizachyrium scoparium*, *Stipa comata*, *Carex filifolia*, *Bouteloua gracilis*, and *B. curtipendula*. *Calamovilfa longifolia* and *Koeleria macrantha* may be found on sandy soils in the eastern part of this community's range. Forbs that may be present include *Gaura coccinea*, *Psoraleidum lanceolatum*, and *Asclepias pumila*. In addition to the herbaceous species, shrubs such as *Symphoricarpos occidentalis*, *Rhus trilobata*, and *Cercocarpus montanus* are sometimes found in this community.

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This community is dominated by *Pinus ponderosa* in the canopy and subcanopy, and by *Schizachyrium scoparium* in the understory. *Juniperus communis* (short shrub) was observed consistently but was never abundant. Canopy and subcanopy coverages are moderate to high (50 to 100%) while herbaceous cover generally is greater than 50%.

OTHER NOTEWORTHY SPECIES Information not available.

CONSERVATION RANK G2G3

RANK JUSTIFICATION

There are probably fewer than 100 occurrences in a restricted range in the northwestern Great Plains. Three occurrences are currently documented, one from South Dakota, and two from Nebraska. Over 8000 acres are currently documented, and at least that much is expected in other occurrences. Two of the currently documented occurrences are in fair condition; it seems likely that occurrences have been degraded by cattle grazing.

DATABASE CODE Cegl002019

COMMENTS

Globally

Periodic fires are probably important in maintaining the open grassland understory of this type.

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This community often occurs in mosaics with other pine types, especially the *Pinus ponderosa* / *Oryzopsis asperifolia* Woodland and *Pinus ponderosa* / *Juniperus communis* Woodland.

This community differs significantly from stands at lower elevations in the Black Hills, where this vegetation type is common. In those lower areas, canopy coverage typically is less than 25%, subcanopy is sparse to absent, and herbaceous cover is higher and more diverse, consisting predominantly of prairie species.

REFERENCES

Hayward, H. H. 1928. Studies of plants in the Black Hills of South Dakota. Botanical Gazette 85(4):353-412.

McAdams, A. G., D. A. Stutzman, and D. Faber-Langendoen. 1998. Black Hills Community Inventory, unpublished data. The Nature Conservancy, Midwest Regional Office, Minneapolis, MN.

Steinauer, G. 1989. Characterization of the natural communities of Nebraska. Pp. 103-141, in, M. Clausen, M. Fritz, and G. Steinauer. The Nebraska Natural Heritage Program, Two Year Progress Report, Appendix D. Lincoln, NE.